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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/780,749

02/19/2004

Tetsuro Ogino

36625

1784

116

7590

01/23/2006

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EXAMINER

UHLENHAKKE, JASON S

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/780,749

Applicant(s)

OGINO ET AL.

Examiner

Jason Uhlenhake

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2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook (U.S. Pat. 6,802,594) in view of Otsuki (U.S. Pub. 2003/0085937).

Silverbrook discloses:

- ***regarding claim 1***, a temperature detection unit for detecting an ambient temperature; the ambient temperature detected by the temperature detection unit (Abstract, Column 2, Lines 25 - 33)

- ***regarding claim 1 and claim 3***, a calculation unit for calculating a misalignment correction value by revising the correction reference value on the basis of a result of comparison between the ambient temperature stored in the storage unit and an ambient temperature at the time of printing; wherein the misalignment correction unit corrects misalignment on the basis of the misalignment correction value calculated by the calculation unit (Abstract, Column 2, Lines 15 - 33)

Silverbrook does not disclose expressly

- ***regarding claim 1 and claim 3***, a print head for making reciprocating motion transversely with respect to a recording medium to thereby perform both forward printing and backward printing on the recording medium

- a misalignment correction unit for correcting misalignment between the forward printing and the backward printing
- a setting unit for setting a correction reference value for the misalignment correction unit ; a storage unit for storing the correction reference value

Otsuki discloses:

- ***regarding claim 1 and claim 3***, a print head for making reciprocating motion transversely with respect to a recording medium to thereby perform both forward printing and backward printing on the recording medium (Paragraphs 0001 - 0002), for the purpose of enhancing printer speed.
- a misalignment correction unit for correcting misalignment between the forward printing and the backward printing (Paragraphs 0005), for the purpose of improving the quality of printing.
- a setting unit for setting a correction reference value for the misalignment correction unit (Paragraph 0050); a storage unit for storing the correction reference value (Paragraph 0008), for the purpose of relieving positional misalignment in the main scanning direction on a forward pass and a backward pass.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of a print head for making reciprocating motion transversely with respect to a recording medium to thereby perform both forward printing and backward printing on the recording medium; a misalignment correction unit for correcting misalignment between the forward printing and the backward printing; a setting unit for setting a correction reference value for the

misalignment correction unit ; a storage unit for storing the correction reference value as taught by Otsuki into the device of Silverbrook. The motivation for doing so would have been to enhance printer speed, improve the quality of printing, and relieve positional misalignment in the main scanning direction on a forward pass and a backward pass.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook (U.S. Pat. 6,802,594) as modified by Otsuki (U.S. Pub. 2003/0085937) in view of Silverbrook et al (U.S. Pat. 6,464,332).

Silverbrook ('594) as modified by Otsuki discloses:

- ***regarding claim 2***, a temperature subrange larger in the amount of misalignment is narrower than a temperature subrange smaller in the amount of misalignment (Silverbrook ('594): Column 2, Lines 7 – 11)
- a calculation unit refers to the temperature subranges including the ambient temperature detected by the temperature detection unit and calculates the misalignment correction value by revising the correction reference value on the basis of a difference between a number stored in the storage unit and indicating a temperature subrange at the time of setting the correction reference value and a number indicating a temperature subrange detected by the temperature detection unit (Silverbrook: Abstract, Column 2, Lines 15 – 33; Column 3, Lines 1 - 2)

Silverbrook ('594) as modified by Otsuki does not disclose expressly:

- ***regarding claim 2***, stores a temperature subrange table on which consecutive numbers for indicating temperature subranges respectively are assigned to

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the temperature subranges obtained by dividing an available temperature range on the basis of the amount of misalignment at each temperature.

Silverbrook et al ('332) discloses:

- ***regarding claim 2***, stores a temperature subrange table on which consecutive numbers for indicating temperature subranges respectively are assigned to the temperature subranges obtained by dividing an available temperature range on the basis of the amount of misalignment at each temperature (Column 5, Lines 32 – 38), for the purpose of improving the quality of printing.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of storing a temperature subrange table on which consecutive numbers for indicating temperature subranges respectively are assigned to the temperature subranges obtained by dividing an available temperature range on the basis of the amount of misalignment at each temperature as taught by Silverbrook et al ('332) into the device of Silverbrook ('594) as modified by Otsuki. The motivation for doing so would have been to improve the quality of printing.

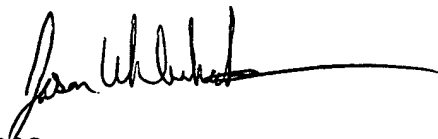
Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Uhlenhake whose telephone number is (571) 272-5916. The examiner can normally be reached on Monday - Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JSU
January 4, 2006




K. E. GINS
PRIMARY EXAMINER